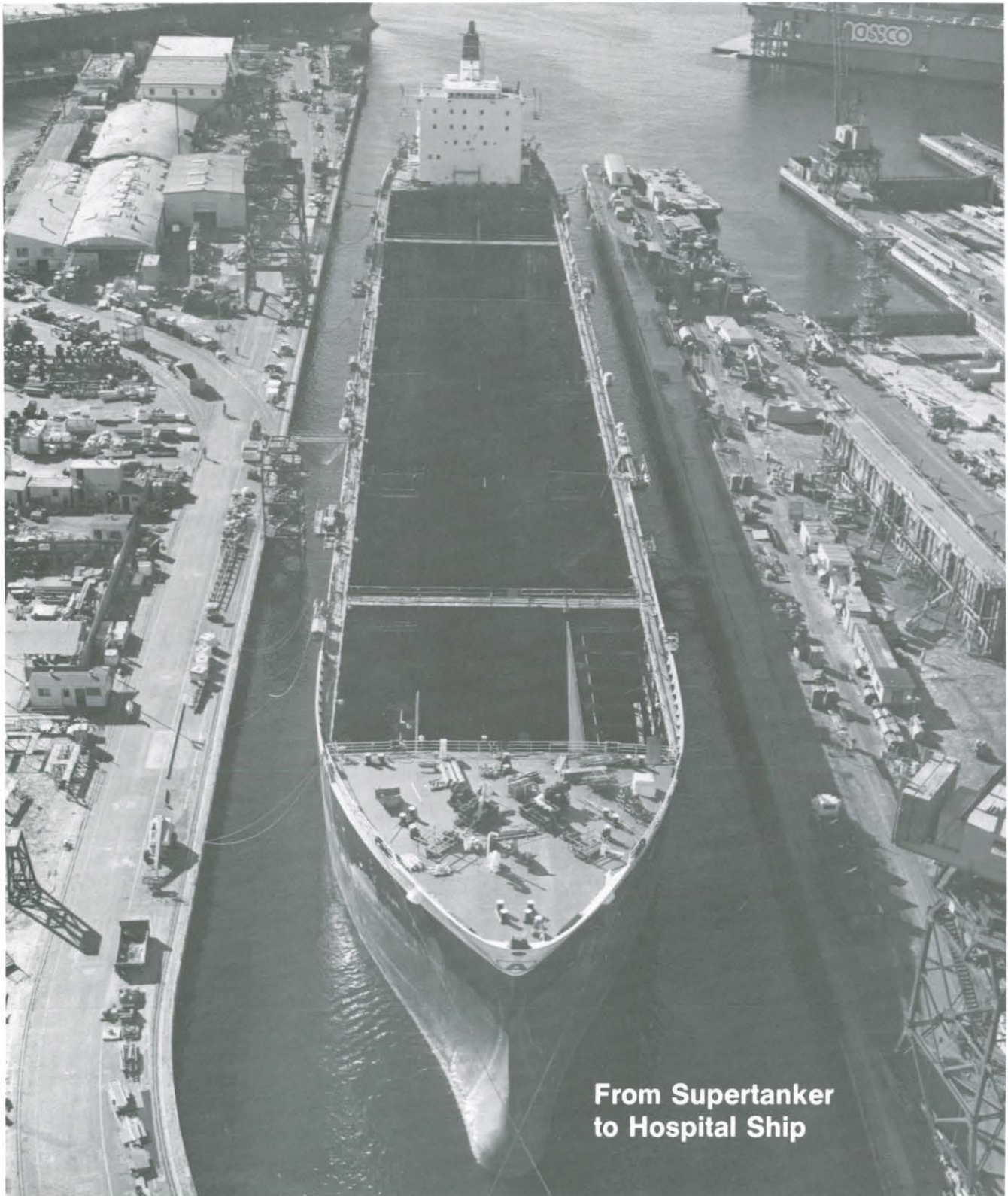


U.S. NAVY MEDICINE

January-February 1985



From Supertanker
to Hospital Ship

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COVER: In a graving dock at the National Steel and Shipbuilding Company, San Diego, the supertanker SS *Worth* undergoes conversion to USNS *Mercy* (T-AH 19), the Navy's newest hospital ship. Story on page 14. Photo by Kim Lee, National Steel and Shipbuilding Company.

We Have a Good Team

As you all know, Navy medicine has taken some sharp hits in the media for a variety of adverse incidents such as the decredentiaing of a Navy physician at a major hospital, a case of unprofessional and illegal conduct by a Navy dentist, reports on the alleged misuse of clinical investigation program funds, an allegation that the Navy "lost" a patient during transfer to a state-side hospital, and a two-part national news program segment which focused on two incidents in which our patients died.

That was all the bad. But who among our media critics has looked at the good? They focus on a doctor or two who, because of judgmental error, may well have had an unfortunate treatment outcome. Which of our critics has taken the time to recall the marines saved by the selfless, dedicated, professional service of our team in Beirut, some of whom gave their own lives in the bargain? Who has remembered our heroic health care providers in Grenada and the many lives saved because of their effort? They criticize instances of bad service in clinics, but which of them took the time to remember our corpsmen who held the guts of their comrades on the way to the chopper in the rice paddies of Vietnam?

They accuse us of losing a patient, but who has taken the time to examine the fact that we move, in cooperation with the Air Force, hundreds of patients every month from facility to facility and do it with flawless precision? Which of our critics has told the story that Navy hospitals and clinics, medical and dental, treat thousands of patients daily and provide the very best treatment?

The problem is that "they" would condemn us on the basis of isolated instances which are nonreflective of what you really do. Do you remember the story of the four blind men examining an elephant? One, holding on to one of the legs, proclaimed the elephant is the same as a tree for it felt like the trunk of a tree. The second one argued that it was like a rope since it felt

like a rope. He was holding the tail—and so on.

We have a good team! Don't be discouraged by the recent rash of reports condemning military medicine. These reports point out incidents and don't give a true picture of what we really are and do. They see the tail and call us a rope or the leg and call us a tree. They are not looking at the overall picture.

I'm not saying we don't have some problems because we do. While our reputation has been tarnished by these incidents, we have ourselves added fuel to the fire of misunderstanding. Let me explain by providing some scenarios:

- A young woman marries a seaman apprentice at home on recruit leave after finishing boot camp. Together they move to an east coast Navy base. He goes to sea. While he is gone she needs medical care. She tries to call the appointment desk, starting at 0700 and even by 1500 hasn't gotten through. She tries again the next day and after 4 hours of trying is told that the earliest she can be seen is in 6 weeks.
- A captain, who is seldom sick, falls, breaks his arm, and is taken to the nearest Navy treatment facility. He sits in the waiting room for 4 hours until he is finally seen.
- A mother goes to visit her daughter in a Navy maternity ward. The decks are dirty. The sheets are blood-stained.

These things happen and when news stories such as we have been experiencing appear, these patients are only too ready to contribute their "horror stories." In the case of the young wife who goes back home, she is an "expert" on the Navy in her community. After all, she is married to a sailor and has seen Navy medicine firsthand. The captain cannot help but carry a lasting impression that Navy medicine is not sensitive. And to the mother, all wards in all Navy hospitals are like this all the time.

We know that these are isolated instances. But, as you've heard me say many times—"You only get one chance to make

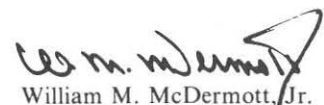
a good first impression." We have a good team. It's time to exercise that team in a positive fashion. Each one of us must share in this responsibility.

Those of you responsible for the administration of the facility must seek ways to streamline the processes and provide responsive, accurate, and courteous service. Remember, we are in business to provide a service. All of us wanted to be here or we wouldn't have asked for this type of work. Provide that service in a friendly, courteous, and helpful manner. Explain to your patients just what the problem is. Even if you have to explain the same things 50 times a day, remember that while it may be your 50th time, it's your patient's first.

Our health care providers must be alert to all kinds of situations which anger or frustrate your patients and attempt to cut them off before they start. Discuss your problems with our administrators and attempt to arrive at a workable solution which benefits the patient.

You, who are supervisors, must pay attention to the relationship between those whom you supervise and the patients. Be aware of the needs of those you supervise and how apparent disinterest can manifest itself in poor patient relations.

For everyone, the time is now to renew our commitment to provide the very best of prompt, professional, and personal medical treatment to those who entrusted us to do just that. If you see something amiss bring it to the attention of your superiors through the proper chain of command. When it comes to things being not as they should be, each of us owes it to our patients (our reason for being) to get it fixed. Rectify, don't justify! Your commitment and total involvement will prove to all who would criticize how good we really are.


William M. McDermott, Jr.
RADM, MC, USN

Three Services Aboard *Midway*

The USS *Midway* (CV-41) may have set a precedent for interservice cooperation in aviation-oriented medicine. CAPT Bruce Siggins, USA, and SSGT David Lewis, USAF, served temporary duty aboard the ship from Yokosuka to Sasebo.

"It's the first time the Navy, Army, and Air Force have worked together in *Midway's* medical department that I know of," says HMC Zelt Dunbar, Medical LCPO.

Siggins, of the Environmental Health Office, Camp Zama, Japan, was aboard for the purpose of certifying a new X-ray machine. An initial survey at sea and a final survey in port at Sasebo were pronounced successes.

"The medical department here is outstanding, a potential award winner," praises Siggins. "I'm tremendously impressed with how they handle casualties and with the overall smoothness of their operation."

Noting the crowded conditions, Siggins lauded the ship's company for "making life as comfortable as possi-

ble. Everybody is very considerate here; sometimes I wish our troops could learn to live so well together."

Siggins made the most of his time taking numerous pictures of flight operations, but confesses that one of his most memorable ventures was finding himself lost somewhere deep within the engineering spaces half an hour after departing main medical for his stateroom.

Lewis, of the USAF Osan Hospital, Korea, was aboard under the auspices of the Medical Orientation Program, doing basically the same job he does at Osan.

"The Air Wing (FIVE) was present at Osan this summer and I heard that *Midway* takes shipriders sometimes," explains Lewis. "I applied and was accepted." The staff sergeant claims "life is more exciting" on *Midway* due to the high tempo of its mission when at sea.

"I'm amazed how well the guys work together," he exclaims. "The corpsmen take good, personal care of the

patients, especially during emergencies. When someone was knocked down by a jet blast, he was carried down here through all those narrow passages and stairwells in a matter of minutes."

Lewis adds that the extended supply system, remoteness of the various medical units, lack of open space, and long work hours make the coordination among *Midway* personnel that much more admirable. He was anxious to spend more time watching flight ops, and how crewmembers operate under general quarters conditions.

"People get along well and care about each other, even in the 'coop' (berthing compartment) as they call it," claims Lewis. "Everyone is courteous and helpful. I think the members of the services would understand their complements better if we would set up a permanent exchange program, and would be more appreciative of each other," he concluded. □

—Story by JO2 B.A. Casteel

PH3 L. Adler



SSGT Lewis checks a patient.

PH3 L. Adler



CAPT Siggins inspects new X-ray machine.



SN David Caldwell talks to Anton Cunningham while awaiting the arrival of Great Lakes NTC Service School Command's Navy Choir.

Project White Hat

Project White Hat celebrated its 17th anniversary this past summer in recognition of the Saturday visits by Great Lakes sailors who volunteer each weekend to brighten the lives of children in the Chicago Childrens Memorial Hospital.

The project was started in May 1967 by CAPT F.M. Lloyd after learning that a child at the hospital wished to meet a sailor. CAPT Lloyd took the youngster a pass which would allow him to board any vessel in the Navy. Sadly, leukemia took its toll before the child had the opportunity. This visit prompted the beginning of Project White Hat, now sponsored by Service School Command at Naval Training Center, Great Lakes.

Movies, storytelling, electric car races, painting, singing, clowns, a cake, and even a tall yellow bird were part of the celebration. The children were later moved in their beds and wheelchairs to the hospital courtyard

for entertainment by the Service School Command Navy Choir and the Navy Band.

After many encores by the band, the long goodbyes began with unhappy faces and tears. It was evident by the picture-taking, promises of visiting, and letter-writing, that everyone was leaving a loved one. These children needed happiness and hope added to their somewhat uncertain futures. The sailors' visit did just that.

The expressions on the childrens' faces are gratitude enough. The smiles and laughter cheer up the rooms and corridors with a glow that can be seen as well as heard. A staffer from the hospital was heard to say that even the employees await each Saturday with anticipation. "During the week, the hospital is just that, a hospital with a sort of gloomy feeling, but on Saturday, after the sailors arrive, it's like a picnic." □

—Story and photos by JO2 Dwayne Rider



Sailors answer questions and lend a helping hand with arts and crafts.

AMSUS Annual Meeting

The following two addresses were presented at the 91st Annual Meeting of the Association of Military Surgeons of the United States (AMSUS) 4-9 Nov 1984 in San Diego, CA. Both presentations have been edited for publication.

Soviet Military Medicine

CAPT Edward Koritny
Israeli Defense Forces

Dr. Koritny is a urologist in the Department of Urology at Safad, Israel, about 8 miles south of the Lebanese border. Before immigrating to Israel in 1977 Dr. Koritny completed medical studies at Odessa University, which included 3 years in military medicine. He subsequently served for a year as a medical officer in the Soviet Black Sea Fleet. He worked at a hospital in Jerusalem and served 18 months as a medical officer in the Israeli Defense Forces (IDF).

Although Dr. Koritny's service with the Soviet Navy was not long and took place some 15 years ago, he is still regarded as an authority on Soviet military medicine. More importantly, he is uniquely qualified to offer a glimpse into an aspect of the Soviet military few, if any, westerners ever see.

I have found that medical practices in the Israeli forces stand in glaring contrast to those in the Soviet Army. This is reflected in the professional competence of the Israeli doctors over their Soviet counterparts, and the sophistication and ready availability of medical equipment even at the lowest level of an Israeli battle unit.

I do not intend to discuss medical practices, especially as there is available information on this subject, but

rather I'll concentrate on Soviet Army medical practices where such information is less readily available. As I have already mentioned, I base most of my theoretical knowledge on my studies in the military medicine department of the Medical Institute of Odessa.

One of my earliest and most frightening recollections was of the lecturer always beginning with the phrase: "When the next war begins" rather than "If the next war begins." When I asked why he commenced thus, he replied that "If they [the Americans] do not start the next war, then we [the Russians] will." Then the lecture presented seemed logical and sound, based as it was on some 30 volumes expounding the medical experiences gleaned from the Second World War, or the "Great Patriotic War" as translated from the Russian. Perhaps this is the greatest disadvantage of Soviet military medicine. Its static and dogmatic nature still relies on looking back to the past rather than keeping abreast of modern developments.

There are some curious statistics from the Second World War. In instances of abdominal wounds, there was a mortality rate of about 63 percent in World War II. Statistics from 1975 show about 20 percent mortality in the conditional hospital. Now even a frontless, extensive operation such as the Peace for Galilee Campaign, [invasion of Lebanon] in which I participated, highlights the tremendous changes and developments that have happened in the ensuing 10 years.

Our lecturer, however, did stress that the next war would probably entail a higher incidence of multiple trauma, especially with the use of tactical nuclear weapons, the employment of which, by the way, is not held in doubt by Soviet officers.

The use of these weapons would result in the figure of 75 percent to 85 percent suffering for multiple trauma and burns. As you all know, the treatment of burns is both complex and controversial, lacking a unitary approach. For the Soviets, even at the upper field levels, there is astounding deficiency of the basic elements needed for minimal treatment of burns such as sufficient quantities of special methylene dressing and portable saline

Soviet military medicine's static and dogmatic nature still relies on looking back to the past rather than keeping abreast of modern developments.

solution in disposable sets. Soviet treatment involves the use of special creams, especially clear creams, sterile bandages, systemic antibiotics, and limited fluid return, via glass bottles and nondisposable infusion sets.

Generally, the professional standard of the Soviet Army doctor is low due to the limitations imposed upon him by the system. Most of the doctors in the service are those doing compulsory service, and enter the army directly after finishing their studies without first gaining much practical experience working in hospitals. Those who might consider signing on in the permanent force are deterred by the fact that the minimal period for service in the permanent force is 25 years. Generally, those who leave medical school after the first year of studies to complete the military medicine sup-

plement are those who have encountered learning difficulties and face the choice of not becoming doctors, or remaining in the Soviet Army for the next 25 years. Many choose the latter, of course. This is not to say that all those doctors in the permanent force are those who were in danger of dropping out, since there exists a special military medicine academy in Leningrad, which has a very good reputation and which accepts students after their first year at other medical schools.

It is said that every Israeli is a soldier on leave for 11 months until he is called up for his month or two of reserve duty. This includes Israeli doctors who contribute some of their rich practical experience to the various units, or take part in some exercise or other, or complete one of the courses available. The Israeli doctor's Soviet counterpart is hardly ever called up for reserve duty and when he is it is mainly for lectures on ABC warfare. These lectures are given via films, most of which are produced by the U.S. Armed Forces, a fact which you may find both amusing and flattering.

For most of the 1960's, the Soviet fleet was composed of small to medium size craft and submarines which generally patrolled waters close to home. The Cuban crisis accelerated and highlighted the inadequacy of the Soviet fleet to operate in distant waters. A decision to deploy a "blue water fleet" compelled the development of larger craft such as the helicopter carriers *Moscow* and *Leningrad*, which entered service about 1969. The late 1970's saw an acceleration of this process with more of the larger craft coming out of the shipyards.

However, even today in the mid-1980's, the bulk of the Soviet fleet is still composed of medium tonnage craft designed for antisubmarine warfare and the "blue water role." This fact poses a special problem for the medical teams operating, as I did, on one of those craft. While in the land forces, the stages of medical assistance range from initial first aid administered by the medic, to the pre-doctor level of

the male nurse to the physician's assistant who studied a year beyond the male nurse and can do minor surgical procedures. The doctor appears only on the brigade level. In Israel, the doctors are at the battalion level.

In the fleet, each ship constitutes a unit unto itself and requires a certain level of medical expertise according to the number of sailors on board. Thus, ships with crews of up to 20 sailors have only a medic, those up to 60 have a physician's assistant, and those above 60 have a doctor. As compared to the land forces that's an appearance of a doctor at a much lower level in the medical pyramid. In most of the medium class warships, there is a doctor. This fact does not guarantee optimum medical treatment as there are several restrictions imposed upon the Soviet fleet doctor.

One of the major obstacles to effective treatment is the limitation of space available to treat patients. The physician must treat them in a concentrated area, considering the expected casualty rate if the ship is hit by enemy fire. My ship, a minelayer of some 160 men, had space for the treatment of not more than 10 men in the medical bay. All other casualties would have had to be dispersed to other areas. I or my four medics would have had to run with equipment between the various sites. Because the fleet would presumably be engaged in action some distance from Soviet shores, evacuation to land facilities would be impossible. It should be understood that the ship's doctor is not supplied with adequate supplies and surgical sets to perform essential life supporting operations.

Today the bigger ships have up to six doctors and operating theaters, so that if one of these is traveling in a battle group, serious cases can be evacuated to them. In retrospect, having many years of surgical experience behind me in both East and West, I can fully realize the extent to which professional help is limited in an autonomous unit such as a Soviet warship, where the major aim and achievement is merely keeping the patient alive until the next port of call.

Despite the bleak picture I have sketched for you, one should not have any illusion that the Soviet fleet with its medical treatment capabilities is a paper tiger. Initially, confusion might reign, but as the battle goes on, the Soviets will quickly find their feet and will adopt more suitable and modern methods, disposing their reliance on Second World War experience. In addition, it should be remembered that the Soviet pool of unskilled manpower, while not unlimited, is nevertheless extremely large, and Soviet sensitivity to losses is not measured in Western terms.

An article written by a Soviet general in 1975 said that the medical corps in Russia requires new laboratory equipment, disposable sets and syringes, and even computers. But up until 3 years ago the available equipment was exactly as it was 15 years ago.

When stocks [of alcohol] are depleted beyond subsistence level, Soviet sailors take to imbibing eau de cologne, after-shave, alcohol-based glue, hydraulic fluids, etc.

Two years ago, on Israeli television, I saw an American film on the Soviet Army which conveyed the impression that it is a weak institution, sometimes bordering on the ludicrous and absurd. There were ex-Soviet Army officers, residing in America, who told of soldiers painting a lawn green for visiting generals. This highlights the extreme discipline in the army and should be regarded as a strength rather than a weakness, and the incident detracts from the other valid points mentioned by these ex-officers.

Two pertinent issues were raised: one was the lack of initiative exhibited by low and medium-ranking officers, and another was alcoholism. The first

issue is of a tactical military nature and need not concern us, but the dilemma of alcoholism is so endemic to the Soviet Army that it warrants closer examination.

Generally, soldiers of the Soviet Army and in the fleet are healthy because those with major medical problems are simply not accepted for service. Soviet society is such that, even at what we would consider a tender age, the Soviet conscript is already rich in experiences regarding the virtue of the bottle. Despite the strict discipline of a military milieu he does not desist from pursuing this favorite pastime. Gradually, the Soviet sailor ignores the absolute injunction against the possession of all alcoholic beverages. The methods of circumventing this prohibition are only limited by the restrictions of human imagination. If the initiative and ingenuity exhibited by simple soldiers could be translated from this field into military capability, the Soviet Army would be one of the most powerful fighting forces to have existed in the whole of the human history.

Alcohol is smuggled aboard via officers and as a replacement for brake fluids, which is something drunk beforehand with vodka and other more potent home-concocted beverages. On my ship, one of the officers was so inebriated that he fell overboard without any visible trace except for a trail of bubbles.

When stocks are depleted beyond subsistence level, Soviet sailors take to imbibing eau de cologne, after-shave, alcohol-based glue, hydraulic fluids, etc. I can vouch for the attraction for some of these items personally, although having medical knowledge, I knew where to draw the line, unlike those pioneers who perished in the quest to push back the frontiers of their physiological possibilities. The frequency of deaths from methyl alcohol poisoning is quite substantial, and those who did not die often were permanently blinded. I possessed the largest reservoir of legal alcohol on board. This alcohol was for sterilization, of

course, and thus I was one of the most sought after officers even for problems not medical. Drunk and immobilized sailors, whether they be ordinary seamen or officers, detract naturally from the preparedness and orderly function of the ship and its equipment. Drunken sailors were often involved in altercations, damaging equipment and themselves, and frequently going AWOL.

The Soviet Army heavily emphasizes ABC warfare during training exercises, lectures, drills, etc. Because of this, the quality of the equipment for use on the ABC battlefield is extremely high. Each soldier has a special bag for gas warfare, containing antidotes and decontamination material. In addition to equipment for the ordinary soldier, medics have indicators as to what type of gas has been used, and wear special suits, including one for protection against radioactivity. However, the suits are made of rubber, and continued functioning in one becomes unbearable after 10 or 15 minutes as the wearer becomes drenched in perspiration. Initially, one regards such drills with the utmost gravity. Soon it becomes overbearing. I recall one drill in Sevastopol, on the Black Sea, in which the alarm went off on a particularly hot day. Following standard procedure, someone duly switched off the external ventilation which I switched back on after a few minutes. This battle continued for about a half hour before I emerged the victor!

About 6 months ago, a surgeon who had immigrated to Israel in the beginning of 1984, told me that during the recent crisis in Poland he was called up for reserve duty as a doctor in a medical battalion similar to the unit in which I served in the IDF. Of the eight doctors in the unit only the five reserve doctors were qualified. The three regular army doctors knew nothing about medical treatment, but were very knowledgeable about erecting tents. Medical equipment such as glass syringes and sets are resterilized and IV fluids are still stored in glass bottles. Intravenous catheters still are not used.

Combat Surgery in the Yom Kippur War

LTC Ron Rozin
Israeli Defense Forces

Dr. Ron Rozin received his formal medical education in the United States. He is the chief consultant and advisor in the fields of emergency medicine and surgery to the Surgeon General of the Israeli Defense Forces and is chief of surgery at Tel Aviv Medical Center, Hadassah Hospital in Tel Aviv.

Prior to 1967 Israel did not have field hospitals or any military hospitals because all the wars were fought on the borders and all casualties were usually taken directly to civilian hospitals. After the Six-Day War, when the fighting took place about 400 kilometers (250 miles) from the nearest civilian hospital, it became evident that we needed a way station to resuscitate those patients wounded on the southern front.

We decided on a location in the Sinai Desert about 30 to 40 kilometers from the Suez Canal and about 300 kilometers from the rear hospitals. It was chosen because of its proximity to an airfield and a very important road intersection in the Sinai. This hospital had to sort and treat 500 casualties in 24 hours, hospitalize 250 casualties, triage 72 casualties simultaneously, and work four operating rooms at the same time. Such a hospital required more than 50 medical officers and a few hundred paramedical personnel. The operating room equipment and that used in the triage area was quite

This was a conflict in which big tank battles generated large numbers of casualties.

sophisticated. The idea was to be able to supply medical care no less sophisticated than one would find in the rear civilian hospitals.

This evacuation hospital's organization was centered around the triage area. It was supposed that the casualties would arrive in various ways. Some would travel through the battalion regimental station and even divisional stations, where blood and surgical facilities were available. Some would come directly through battalion stations, flown by helicopter straight to the evacuation hospitals, and some would pass through the regimental station.

Another function of the evacuation hospitals was to sort the casualties evacuated later from it to the hospitals in the rear. It became evident that this function was of prime importance because we could save a lot of time and means by sending the severely wounded to the grade A hospitals and the less severely wounded to the grade 2 and grade 3 hospitals. This way we prevented the shuffling of wounded from one hospital to another.

It became very clear on 6 Oct 1973 that we were dealing with an entirely different war than we were used to. This was a conflict in which big tank battles generated large numbers of casualties. What was characteristic of this kind of fighting was the wounded could not be evacuated all the time but only during lulls in the battle or at nightfall. The wounded were brought back in large helicopters to the evacuation hospital. And they didn't arrive 2, 4, 6, or even 10 at a time, but came in waves of between 36 and 140, overwhelming the medical personnel. We dealt with this problem by redistributing manpower and evolved the system that we still use.

We divided all medical personnel into three identical teams, each headed by a senior surgeon, who also acted as the chief sorting officer. Each team had three anesthetists, a chest or vascular surgeon, a urologist, an orthopedic surgeon, two senior surgeons, and an additional specialty that would act as a junior surgeon for the group.

The paramedical team composed of corpsmen, nurses, and blood bank technicians were distributed in a similar manner. A group of specialists composed of a neurosurgeon, an ear, nose, and throat man, and an ophthalmologist was called in by the chief surgeon for consultation when needed.

When the Yom Kippur War began, as I already mentioned, the wounded

About 71 percent of the wounded that arrived were seen and treated by a medical officer within 1 hour of being wounded.

were brought in and triaged. Those with cardiac arrest or barely breathing were assigned up to four medical officers, who "pounced" on them. We call it pouncing because each physician pounces on a casualty. One inserts a tracheal tube and the others insert two intracostal drains, two subclavian catheters, and a Foley catheter. Within a few minutes the beginning of the resuscitation has ended and the physicians can be assigned to other wounded. The more severely wounded are assigned one physician a little later and the lightly wounded wait their turn until the pressure is off.

The triage area functioned like this for 20 days. One day 440 wounded were brought in. After we had treated more than 4,000 casualties we began to see a pattern. About 3 percent of the wounded, after being resuscitated by intravenous fluids and blood transfusions, still could not be rendered stable enough to be transported to the rear. They needed immediate surgery. About 60 percent could be resuscitated within an hour and would be moved to a waiting tent until transportation by fixed-wing aircraft could be arranged to a rear hospital. About 9 percent were psychiatric casualties and remained in the area for further treat-

ment. We estimated that about 27 percent could be treated at the hospital and returned to the field units, but we later found that we tended to underestimate the wounds. Only some could be returned to the field units; the rest had to be evacuated a day or two later to rear hospitals. This way we prevented pressure on the rear hospitals by keeping the wounded at the field hospital.

The chief surgeon based part of his decision on who required immediate surgery on the time it would take to evacuate the patient to the rear. On days when the war slowed down and when the weather in the desert was good enough, it took about 4 hours to transport the wounded from the triage area to the emergency rooms of the rear hospitals. That time included movement from the triage area to the airstrip, loading the aircraft, and about an hour or an hour and a half of flight time. This was a very important consideration because if the time interval was longer, more than 3 percent would have had to be operated on.

Because the operating facilities were first rate, the consideration whether to operate or not was more a question of patient load and the expectation that many wounded could come flooding in at any time. The evacuation hospital always had to be ready to deal with that situation.

After the war we reviewed about 4,000 casualties treated in the evacuation hospital and found something very remarkable. About 71 percent of the wounded that arrived were seen and treated by a medical officer within 1 hour of being wounded. There are not too many armies that have this kind of record. Our philosophy in the Medical Corps of the Israeli Defense Forces is that the medical officers are an integral part of the battalion teams and are with the battalion at the front. The attrition rate among physicians is equivalent to that of the infantry or the paratroopers. But what we do achieve is treatment within 1 hour for about three quarters of our wounded at evacuation hospitals. As a result many of our seriously wounded can be saved. □

The Mystery of Peking Man

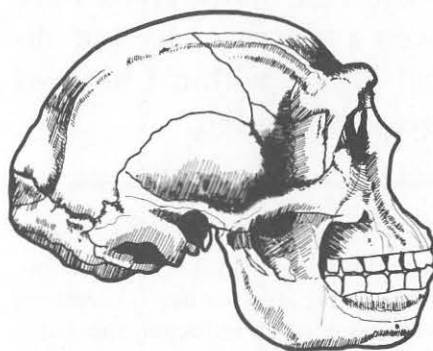
LT F.C. Brown, MSC, USN

The saga behind the disappearance of the Peking Man fossils more than four decades ago remains one of the enduring mysteries of the Orient, a puzzle which has whetted the appetites of readers the world over.

Undoubtedly, some of the attraction is due to the very elements which make up the story—foreign intrigue, exotic locales, and more than a dash of skulduggery, to say nothing of a six-figure reward.

Also of interest is the *dramatis personae*, which includes a Navy physician, a hospital corpsman, marines from the former Legation Guard in Peking, Chinese officials, and officers of the dreaded Japanese *Kempetai*. Add to that a host of international archaeologists, anthropologists, and scholars and one begins to get the flavor of the Peking Man story.

The story begins on a brisk December day in 1926 at Chou-kou-tien, about 30 miles southwest of Peking. During excavations in an area where local peasants had reported finding "dragon bones," a member of the scientific research team working a designated site unearthed a fossil tooth, homonid molar. The discovery was greeted with enthusiasm, and over the next few years excavation efforts were intensified with more fossils being uncovered.



Reconstructed skull of Sinanthropus Pekinensis, or "Chinese man from Peking."

The big break came in 1928, when a worker picked up a skull from under his shovel while digging in a cave. Although he didn't realize it, he had just made one of the greatest scientific discoveries of all time. The skull of Peking Man was the first solid evidence that modern man evolved from the ape. Excitement spread throughout the scientific world as additional skulls and bone fragments were unearthed at the digging site. The collection of fossils was formally termed *Sinanthropus Pekinensis*, or "Chinese Man from Peking," but the popular name of "Peking Man" stuck.

The fossils remained in the Peking area for the next 15 years, where such eminent scholars as Dr. Eugene Opie, Father Teilhard de Chardin, and Professor Franz Weidenreich studied them. Further scientific digs also continued at the Chou-kou-tien site.

The mid-1930's proved to be a period of unrest and political chaos in

China, as Japanese forces pushed south and occupied more and more Chinese territory. Open hostilities commenced in July 1937, and shortly thereafter the Japanese occupied the ancient city of Peking. American and Chinese scientists began to fear for the safety of the fossils, which were kept at the American-sponsored Peking Union Medical College. Japanese government officials had earlier expressed an interest in the bones, and many believed they would be seized and sent to Japan.

This feeling of uncertainty continued until the autumn of 1941, when it became evident that war between Japan and the United States was merely a matter of time. American scientists and their Chinese colleagues agreed that the fossils should be shipped to the United States for safekeeping, and initiated steps to effect their transfer.

The Peking Man relics were packed with extreme care and given to COL W.W. Ashurst, Commander of the North China Marines. Ashurst in turn had the bones packed in the luggage of LT William T. Foley, MC, the medical officer assigned to the Marines. The North China Marines were planning to depart the area and relocate to the Philippines, and sent their baggage—including the priceless fossils—by rail to Camp Holcomb, a small Marine installation near the city of Chinwangtao. COL Ashurst knew that Dr. Foley would be traveling on to the States after landing in the Philippines and entrusted him with delivering the fos-

LT Brown is the HM/DT rating assignment officer at the Naval Military Personnel Command, Washington, DC. He is a fellow of the Company of Military Historians and the International Center for Asian Studies.



Staff of Peking Union Medical College about 1940. The distinguished scholar, Dr. Weidenreich, stands at center of front row.



Camp Holcomb, a small Marine installation near Chinwangtao and last known habitat of the Peking Man relics.

U.S. Marine Corps



Courtesy COL John A. White, USMC (Ret.)

COL (then CAPT) White as officer of the day, Tientsin, China, January 1941.



North China Marines being marched into captivity, Peking, January 1942.

sils to the American Museum of Natural History in New York for safekeeping.

Unfortunately, history intervened. With the Pearl Harbor attack, the North China Marines soon found themselves surrounded by thousands of hostile Japanese. Believing they would be treated in accordance with the Boxer Protocols of 1901, which gave them diplomatic immunity and called for their repatriation in the event of hostilities, the North China Marines in Peking, Tientsin, and Chinwangtao surrendered. The Japanese subsequently refused to honor the Boxer Protocols, however, and the Marines, rather than being repatriated, became prisoners of war.

HM Herman Davis was with a detachment of 18 marines at Camp Holcomb when the order to surrender came. He had been looking after Dr. Foley's luggage, which had reached the camp, but was unaware that it contained the Peking Man relics. Davis later reported that after laying down their arms, the marines from the camp were transported to Tientsin, where they were imprisoned. The Japanese then ransacked Camp Holcomb, breaking open boxes and lockers and helping themselves to the contents. They also pillaged boxcars on a nearby siding, where much of the marine bag-

gage was stored. It is at this point that the trail of Peking Man disappears.

The North China Marines spent the war years in a variety of prison camps in Japan, China, Manchuria, and Korea. Many died at the hands of brutal camp guards, while others suffered debilitating injuries. Both Dr. Foley and Davis distinguished themselves during their years in captivity, ministering to their fellow prisoners and saving many lives.

With the cessation of hostilities in September 1945, an immediate hunt was launched for the fossils, to no avail. No one seemed to know the ultimate fate of Peking Man, and investigators found that stories relating to the fabled relics were often contradictory. The Japanese had displayed a keen interest in the relics, but postwar investigation failed to establish that they had ever taken possession of them. In fact, the Japanese claimed that their own Kempetai, or secret police, had attempted to track down the bones but were unsuccessful.

Over the ensuing years, several people in the United States, Australia, Burma, Taiwan, and the Philippines have all claimed to be in possession of the artifacts and offered to part with them—for a substantial reward, of course. Subsequent investigation revealed the claims to be bogus.

Interest in Peking Man was revived in 1972 when an American stockbroker, claiming he was acting at the behest of the Chinese government, offered a reward of \$100,000—later raised to \$150,000—for the safe return of the fossils. He received more than 500 responses to his offer, including one from a woman who claimed her late marine husband had brought the bones back from China. She offered to part with the bones for \$500,000. She never managed to substantiate her claim, however, and the bones failed to materialize.

To date, this international mystery remains unsolved and the search for Peking Man goes on, though perhaps fruitlessly. COL John A. White, USMC, former executive officer of the Tientsin detachment of the North China Marines, feels the relics may never be recovered. White, who has followed the Peking Man story for years and is an authority on the subject, recalls the Japanese looting of Camp Holcomb, and feels that the bones "returned to the dust of China" under the heel of a pilfering Japanese soldier's boot. Others tend to agree with this scenario, believing that an ignorant soldier, finding the bones during the looting spree and oblivious of their significance, simply discarded them. □

Some Thoughts on Baby Fae

"I wish an angel would come and make her well."

Kidney transplant recipient Sara Cumings, 5, spoke sincerely with an awareness that belied her young age. Her wish was for Baby Fae, the month-old girl who was the first child to receive an animal heart transplant. It was only a few hours before the infant died 15 Nov 1984 at the Loma Linda University Medical Center, Loma Linda, CA.

With her parents, CDR and Mrs. Ron Cumings of the Pacific Missile Test Center, Point Mugu, CA, Sara was being interviewed at home by a television news team for an evening news segment about Baby Fae.

Baby Fae was born 3 months prematurely at Barstow Community Hospital to a 23-year-old woman. When signs of breathing and heart trouble were detected, the infant was taken to the Loma Linda facility. She was diagnosed as having an almost always fatal condition in which the side of the heart that pumps blood in the body's principal artery fails to develop. The child's malformed heart was replaced with that of a baboon during the historic surgery by Dr. Leonard Bailey on 26 October.

"I am happy she got a new heart," Sara said during the interview. "I hope she will feel better now."

In March 1983 Sara underwent a successful kidney transplant that saved her life. Her own kidneys had stopped functioning almost 3 years earlier, and Sara's life became a nightmare of blood transfusions and dialysis. The Cumings family knows the anguish and frustration of waiting for a suitable donor organ to become available. They also know the joy a successful transplant can bring. In the interview with ABC television news man Ron Olsen of Channel 7 in Los Angeles, CDR and Mrs. Cumings

shared their thoughts and feelings about the Baby Fae transplant controversy.

"I think the Baby Fae transplant was fantastic," said CDR Cumings, who serves as the range designated programs officer and manager of the Pacific Missile Test Center's Trident missile effort. "When you consider what a healthy organ will do for a child, whether it comes from a human or an animal, if the result is what we've seen with Sara, it is worth it."

"When your child is clinging to life by a thread, as Sara was, there is nothing you will not try," Mrs. Cumings said. "There is nothing worse than the agony of waiting for a donor organ and thinking, as we did, that it will not come on time because there is such a shortage. You grab at the slightest bit of hope—anything that will keep the child alive."

Asked to respond to people who say that Baby Fae's doctors should not have put a baboon heart into a human being, Mrs. Cumings commented, "I would say that they should walk in the shoes of the child's parents. The heart is only a pump. They did not give the infant the characteristics of an animal, they gave her a pump to circulate her blood so that she could live. I have no problem with that." She emphasized, however, the great need for more people to become organ donors.

"People must talk to their loved ones and make their wishes known," she pointed out. "Doctors will not authorize organs for transplant without family consent. A donor must also document his or her wishes." She explained that donor cards are available at medical facilities and an indication can be made on a California driver's license. She said that if more people would donate, parents would not have to resort to animal transplants as Baby Fae's did.

Mrs. Cumings said the family was deeply saddened by the news of Baby Fae's death.

"We told Sara about it the morning after the interview." Her face crumpled, tears filled her eyes, and she cried," Mrs. Cumings said.

I am sad for Baby Fae and her parents, but I am also sad for all the other children and adults who die waiting for organs. I grieve for Baby Fae as an individual and for the donor situation in general." □

—Story and photo by PH2 Gary Rice, Public Affairs, Pacific Missile Test Center, Point Mugu, CA



Sara Cumings

Hyperbaric Treatment Yields Impressive Results



BM3(DV) Michael J. Van Edwards monitors gauges and manipulates valves controlling the hyperbaric environment.

The Charleston-based submarine tender USS *Frank Cable* recently provided two civilians with unusual medical assistance in the form of hyperbaric oxygen treatments.

Hyperbaric medicine is the use of oxygen therapy under pressure, in this case using *Frank Cable's* recompression chamber. According to LCDR Mark Murphy, Commander Submarine Squadron Four Undersea Medical Officer, the rapidly growing field of hyperbaric medicine is based largely on the Navy's expertise in the treatment of diving accidents and ongoing research in the field. "The treatment of civilians in hyperbaric chambers is not new," said Murphy. "In fact, most cases of decompression sickness (bends) and air embolism occur in the civilian sport diving community and

are treated in Navy operational chambers."

However, these two patients are not sport divers. Fifty-seven-year-old Harvey Stringer, now retired, was an electrical control operator for public works at the Naval Weapons Station. Three years ago he developed osteoradionecrosis, a degenerative bone disease of the jaw after receiving radiation for cancer of the mouth. According to Murphy, Stringer's cancer was cured surgically, but he developed a gradual erosion of his jaw following radiation therapy and the extraction of several teeth.

The mid-portion of Stringer's jaw had to be removed surgically, but left him with exposed bone in the floor of his mouth which would not heal and caused extreme pain. Stringer said that, prior to the *Frank Cable* treatments, he had spent about \$60,000 on treatment, forcing him to sell most of his personal belongings.

Murphy said the second patient, 33-year-old David Blair, sustained a compound fracture of his right leg in 1979 and underwent repeated surgical attempts over the last 5 years to join the tibia, all of which were unsuccessful. In addition to the fracture non-union, the bone developed an infection known as osteomyelitis. According to Blair, doctors have tried electrical stimulation, medication, antibiotics, physical therapy, and casts in the last 3 years without success. Blair said hyperbaric treatments were his last option before amputation. Blair works in the Charleston Naval Shipyard Planning Department Design Division as an engineering technician.

Both patients received 20 treatments, spending 2 hours a day in



David Blair (left) and Harvey Stringer spent 2 hours each day, for 20 consecutive days, inside USS *Frank Cable's* recompression chamber for hyperbaric oxygen treatments.

Frank Cable's recompression chamber with a diving corpsman. *Frank Cable's* diving locker, under the direction of CWO2 Michael Burk, monitored time and pressure.

The treatments were a big success for both patients. The exposed bone on the floor of Stringer's mouth closed completely on one side and partially on the other. He has since undergone surgery at the Veteran's Administration Hospital, where a part of one of his ribs was grafted to his jaw. Stringer has nothing but praise for Murphy and *Frank Cable's* diving locker. "They're

the greatest," he said, "best in the world."

Blair's leg infection, as well as the pain, decreased significantly. He has undergone surgery twice since the hyperbaric treatments; once to clean up what was left of the infection, the second for a muscle/skin graft. He expects one more operation for a bone graft. Blair said his orthopedic surgeons at Medical University of South Carolina were "very impressed with the results of the hyperbaric treatments . . . and so am I." He calls *Frank Cable's* diving locker "a class act."

According to Murphy, *Frank Cable's* commanding officer, CAPT James E. Grise, was "tremendously supportive of this effort from the outset." Approval to use the chamber to treat Stringer and Blair began with Grise but was not entirely his decision. However, compelled by the patients' predicaments, he obtained the required approval through the Naval Medical Command and authorized the treatments. □

—Story and photos by JO1 Bryan Mansfield, Public Affairs Office, COMNAVBASE, Charleston, SC.

Navywide Study of Shipboard Independent Duty Corpsmen

The shipboard independent duty corpsman, NEC 8425 and 8402, represents a very critical and visible link between the Navy Medical Department and the fleet. As the Senior Medical Department Representative (SMDR), the independent duty corpsman accepts the challenge and responsibility of managing all aspects of the shipboard medical department and its programs.

While most agree that the position of the shipboard independent duty corpsman is complex and demanding, there is very little current information regarding the role of the SMDR and the scope of his duties. In order to develop a sound information base for Navy Medical Department decisionmaking, the Commander of the Navy Medical Command, the CINCPACFLT and CINCLANTFLT Fleet Surgeons, and the Type Command Force Medical Officers have endorsed a Navywide project to collect information from shipboard independent duty corpsmen. Although the scope of the project

requires the use of questionnaires, great care has been taken to involve currently active shipboard independent duty corpsmen in the development process. These project materials consist of (1) a task inventory, (2) a background inventory, (3) an organizational support questionnaire, and (4) a 7-day work diary/activity log.

Pending final approval from line commanders in January or February, these project materials will be mailed to all ships and submarines with an independent duty corpsman serving as the SMDR. The responses will then be integrated with data already collected from the faculty and students at the Naval Schools of Health Sciences and NUMI. The final report should be useful throughout the Navy Medical Department chain of command in examining issues and making decisions regarding the administrative, clinical, and nonmedical requirements of shipboard independent duty, the degree of support shipboard corpsmen receive from both the operational community

afloat and the medical community ashore, the optimal career ladder for independent duty, the advanced hospital corps school curriculum, the potential role of computers in sickbay, and a number of other areas related to shipboard independent duty.

We at the Naval Health Research Center realize that shipboard independent duty corpsmen do not have a lot of time to spend filling out questionnaires. We believe, however, that the best decisions about a group as important as the independent duty corpsmen should be based upon input from the individuals on the job. Therefore, all SMDR's will be receiving a packet of materials from the Naval Health Research Center in January or February. We will give you our best shot in conducting the study and providing comprehensive feedback to all who participate. We hope you will give us yours in responding to the survey.

—Naval Health Research Center, San Diego, CA

Hospital Ships Are Back

If all goes according to schedule, the Navy will have two hospital ships by the summer of 1987. Not since USS *Repose* and USS *Sanctuary* were decommissioned near the end of the Vietnam era has the Navy had a floating surgical hospital capable of providing mobile, flexible, acute medical care to Marine amphibious task forces, forward deployed Navy fleet activities, and the Rapid Deployment Force.

It has been said that hospital ships are children of necessity mothered and fathered by war. Readied for action during national emergency, rarely have such vessels been maintained in peacetime and rarer still have they survived the transition from war to peace in a commissioned status.*

Although 15 Navy hospital ships were operating by the close of World War II, only USS *Relief* (AH-1) began as a hospital ship.** The others were converted from liners, freighters, and transports. *Haven*, *Consolation*, and *Repose* also saw duty during Korea, *Sanctuary* and *Repose* during Vietnam.

Why the need for hospital ships in peacetime? In the late 1970's planners concluded that the Navy lacked adequate mobile medical assets to deal with so-called brushfire conflicts. The

*The exceptions are *Relief*, which served between the World Wars before being modernized for duty in World War II, and USS *Consolation*, which saw duty between World War II and Korea.

**The other Navy hospital ships of World War II were *Refuge* (AH-11), *Solace* (AH-5), *Samaritan* (AH-10), *Bountiful* (AH-9), *Rescue* (AH-18), *Haven* (AH-12), *Tranquillity* (AH-14), *Consolation* (AH-15), *Sanctuary* (AH-17), *Repose* (AH-16), *Benevolence* (AH-13), *Mercy* (AH-8), *Comfort* (AH-6), and *Hope* (AH-7).

Iran hostage crisis underlined that deficiency and spurred action on a hospital ship program.

Attention initially focused on the acquisition and conversion of the SS *United States*, but studies found the former luxury liner inadequate. Instead, the Navy solicited the shipbuilding industry, outlining the necessary bed, equipment, and space requirements for a hospital ship prototype. After a subsequent review of proposals by the Naval Sea Systems Command, the Naval Medical Command, and the Military Sealift Command, two companies were chosen to develop a comprehensive design and submit proposals for implementing the conversion. A final decision was made and the National Steel and Shipbuilding Company was awarded the contract for converting two San Clemente class supertankers.

The two new hospital ships, USS *Mercy* (T-AH 19) and USNS *Comfort* (T-AH 20) are 894-foot-long. Each has a raised forecastle, transom stern, bulbous bow, and an extended deckhouse with forward bridge. The absence of a high amidship superstructure cluttered with antennae and funnels allows for a spacious helicopter landing deck and flight control facility. A low center of gravity enhances the ship's anti-roll stability for crew and patient comfort.

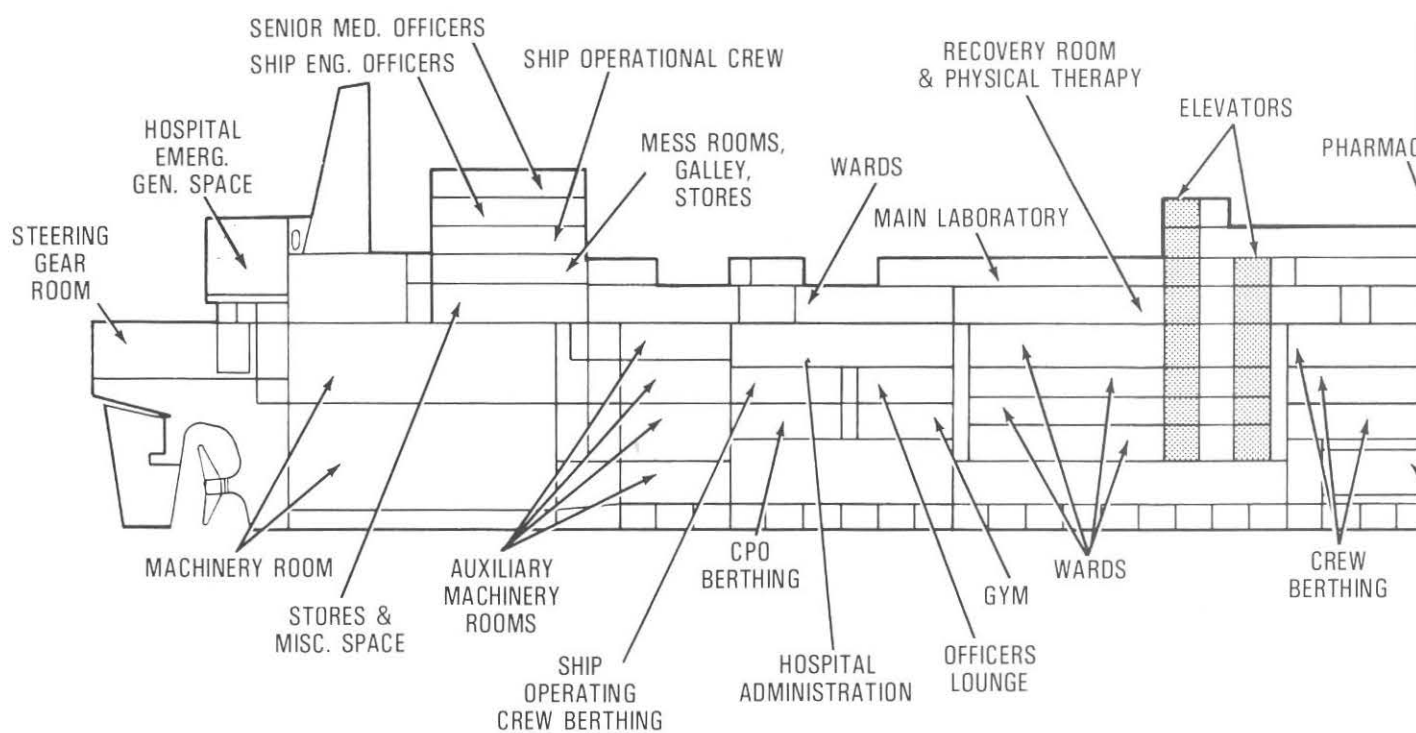
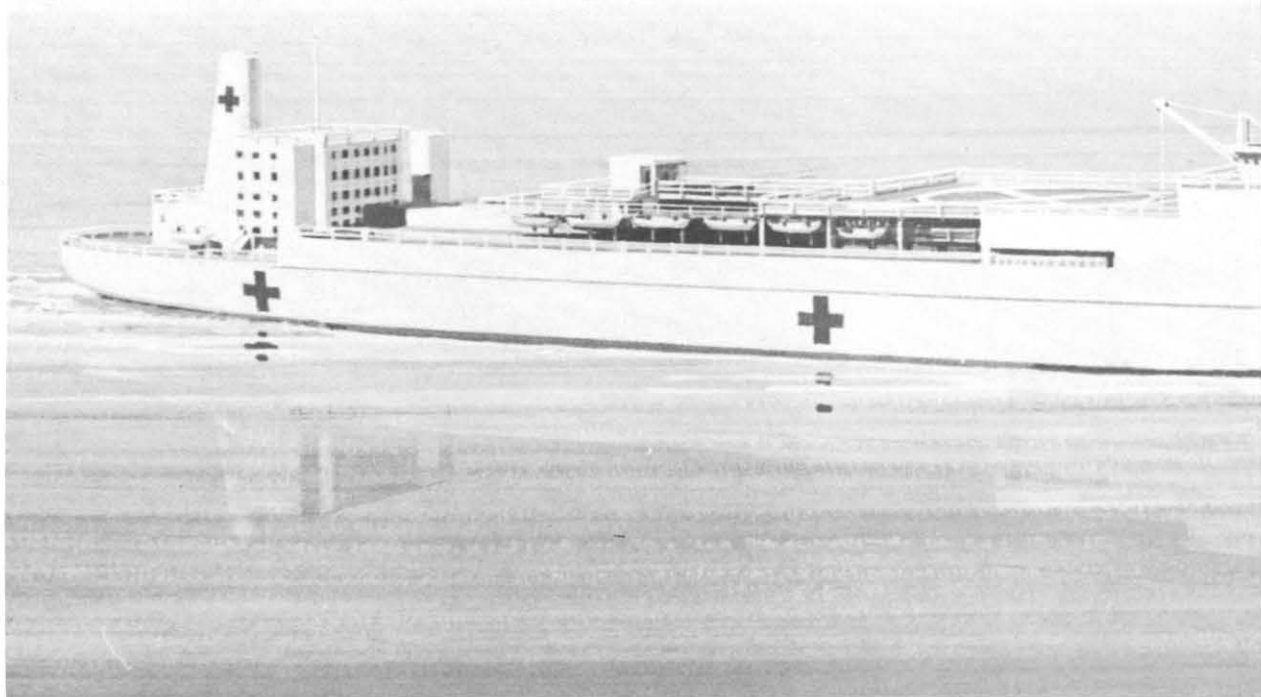
Medical Services

The casualty reception area on the main deck receives all patients transported by boat or helicopter. Initial triage and stabilization of patients is performed here. The area has five modules with a total of 50 positions, each equipped with piped oxygen, suc-



The supertanker SS *Worth* soon to become hospital ship USNS *Mercy*.







Artist's conception of the T-AH 19 hospital ship.

tion, and cardiac monitoring capability. Radiological rooms, the satellite laboratory for emergency testing, and the operating complex are nearby.

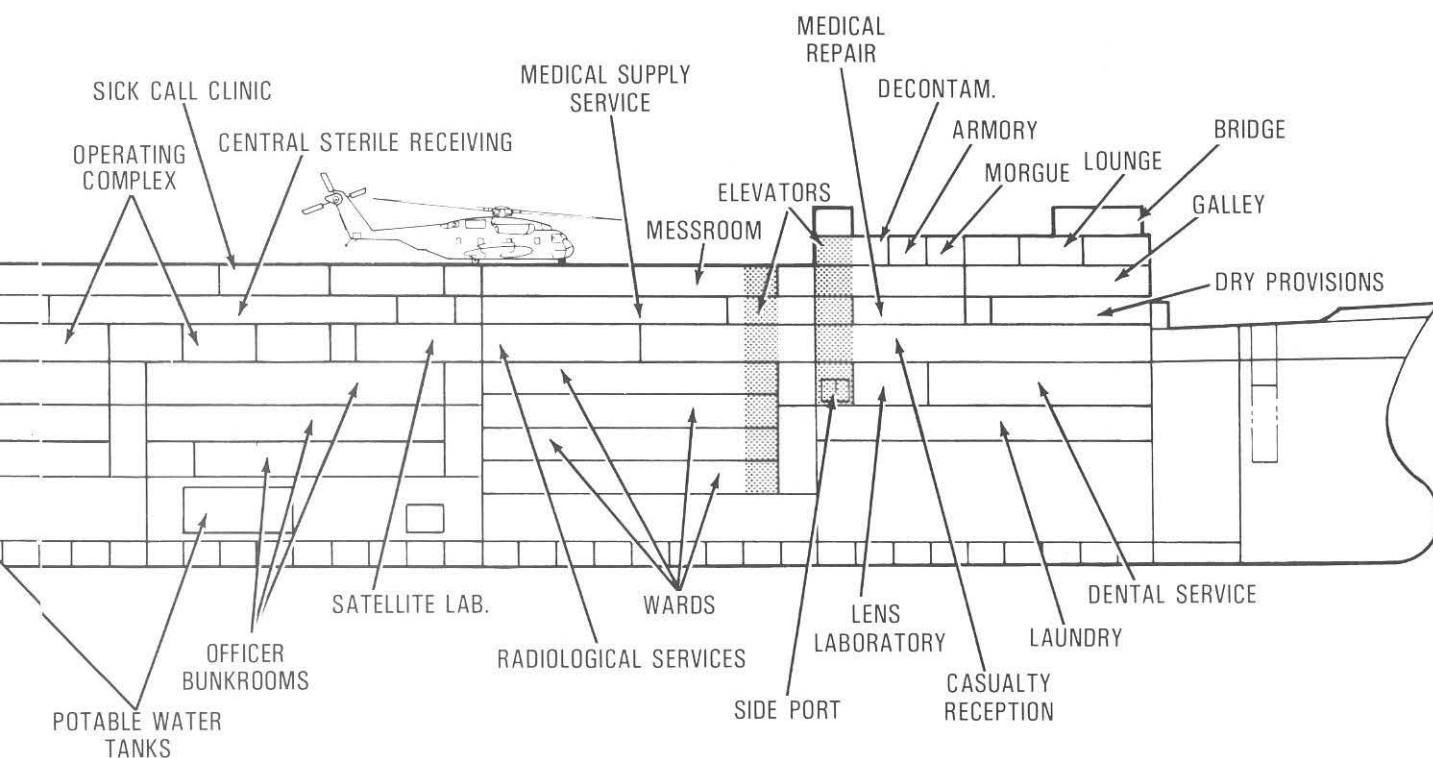
The operating complex, located near midship, contains 12 operating rooms. It is adjacent to and forward of the recovery room and intensive care wards and aft of the satellite laboratory, radiology, and the casualty reception area.

Aft of the operating complex on the main deck is the recovery room. Control stations are centralized to provide consistent monitoring and observation of patients' vital signs. A nurse's station, treatment room, equipment, and general storage spaces are nearby. Directly above on the 01 level are the main laboratory and pharmacy.

The ship's intensive care unit performs the same function as would an

T-AH 19 Class Hospital Ship

Length Overall	894 feet
Beam	105 feet 9 inches
Draft, Design	32 feet 9 inches
Displacement at Design Draft	69,360 long tons
Sustained Speed	17.5 knots
Propulsion	Single screw, geared steam turbine
Shaft Horsepower	24,500





ICU in any modern hospital by providing additional treatment and constantly monitoring critically ill or injured patients. Located adjacent to the recovery room on the main deck, it has 80 single beds (20 in each of the 4 wards) with piped oxygen, suction, and a central monitoring system. Each

ward has sanitary facilities, a nurse's station, a treatment room, equipment, and general storage rooms.

Seven intermediate care wards contain 280 hospital berths (two high) and include a number of single-high berths for patients requiring multiple traction apparatus, frequent dressing changes,



On his way to treatment: Commissioned on 28 Dec 1920, USS Relief was the first and only vessel of the Navy designed and built from the keel up as a hospital ship.

vides a nurse's station, treatment room, shower and sanitary facilities, nourishment room, and a space for general storage.

Seven limited care wards provide 500 two-high hospital berths for ambulatory patients. Each ward contains a nurse's station, a treatment room, and general storage area.

Hospital Support Services

The radiological service is located between casualty reception and the operating complex. It contains four X-ray rooms with three automatic and one manual processor. Visual imaging is possible utilizing general X-ray and fluoroscopic equipment.

Central sterile receiving is near mid-ship on the 01 level, immediately above the operating complex. From there it receives and processes all soiled material, including trash and linen using a closed loop of dedicated clean and soiled cart lifts. It receives surgical linen from the laundry for sterilization and replenishes the cart assembly, including selection and packaging of instruments. Staff and materials are accessible by elevators both fore and aft.

The main laboratory on the 01 level is equipped to collect and process all types of patient specimens. The satellite laboratory provides the quick result reporting required by casualty reception and operating complex patients. Located on the main deck, it is immediately forward of the operating complex and convenient to both the casualty reception area and recovery/ICU wards.

The medical supply service is at the forward end of the 01 level with several decentralized storage areas distributed throughout the ship to reduce large movements of supplies during peak casualty periods. It provides an inte-

grated system for ordering, receiving, and maintaining all medical supplies.

The medical repair section, responsible for maintenance of medical equipment, is on the 01 level near the medical supply service and is accessible via ladders and elevators to all parts of the ship.

The pharmacy is also on the 01 level just forward of the main laboratory and adjacent to central sterile receiving.

The messroom, used by crew, staff, and limited care patients, and galley are on the 02 level. Food and beverages for non-ambulatory patients will be served from nourishment rooms located in the intermediate and light care wards.

Laundry service is on the second platform forward. Clean linen is transferred on forward elevators to a holding area on the 01 level and surgical linen goes to central sterile receiving. The laundry will also provide for staff clothing.

Special Features

Operating rooms, recovery room, ICU, and casualty reception get oxygen and suction via outlets near each bed. Oxygen and suction are provided in all other areas by use of portable bottles or equipment. There are liquid oxygen generators capable of producing a total of 400 pounds of liquid oxygen per hour. Five-hundred medical gas bottles are available for emergency backup. In addition to the 02 piping system, charging stations are provided for recharging O₂ bottles in sufficient quantity to meet requirements in those wards without hard-piped O₂. There is also storage for a 1-day supply of O₂ bottles in a central issue location and another day's supply at the charging stations.

Four distilling plants, each capable

and additional support equipment. Each ward has a nurse's station, a corpsman work station, two treatment rooms, shower and sanitary facilities, nourishment room, and a general storage room.

Two light care wards contain 120 two-high hospital berths and each pro-



of producing 75,000 gallons per day are provided. Up to 300,000 gallons of water can be stored in four independent tanks to guard against total loss in the event of contamination. Water is treated with a recirculating bromination system.

Conversion and Manning

Conversion of the first San Clemente class supertanker hull, SS *Worth*, to hospital ship USNS *Mercy* (T-AH 19) began on 20 July 1984 at the National Steel and Shipbuilding Company yard in San Diego under a



With the graving dock pumped dry, work can begin removing the tanker's internal baffles and replacing them with the hospital's modularized components.

Proposed Ship's Complement

Ship Operational Personnel

Military Sealift Command Officers	14
Military Sealift Command Crew	54
Total Civilian	68

Medical Staff

Senior Officers	9
Other Officers	250
CPO's	31
Other Enlisted	530

Medical Support

Officers	12
CPO's	18
Enlisted	342

Communications

Officers	1
CPO's	1
Other Enlisted	13
Total Military	1,207

approximately 14 officers and 54 crewmen. The hospital will be manned by Navy medical and support personnel (see above).

The current plan is to maintain the vessels in a Reduced Operating Status (ROS) in a continental U.S. port. The ships will be ready for deployment 5 days after the issuance of sailing orders. Necessary support personnel and a 15-day supply of consumables will be aboard by that time. Non-essential medical personnel and a limited quantity of medical stores may be airlifted to the theater of operations and brought aboard after the vessel's arrival on station. While in ROS status, a cadre of medical personnel will perform medical equipment and medical supply maintenance. The ship will

be manned by a reduced civilian crew for upkeep of the engineering systems and nonmedical spaces.

* * *

In a simpler age we awaited the outbreak of hostilities before feverishly converting civilian vessels to hospital ships and rushing them into action. The post World War II experiences of Korea, Vietnam, Iran, and the Middle East dictate that hospital ships are a necessary part of the readiness concept. With *Mercy* and *Comfort* soon to join the fleet the ability of the operating forces to meet contingencies anywhere in the world can only be enhanced. And isn't that what readiness is all about? —JKH

Naval Sea Systems Command program. Conversion of SS *Rose City* to USNS *Comfort* (T-AH 20) is scheduled to begin in April 1985.

The new vessels will be assigned to the Military Sealift Command (MSC) and operated by a civilian crew of

The *Tarasoff* Duty to Warn: Malpractice If You Do, Malpractice If You Don't?

LT Amanda Linn Cashion, JAGC, USNR

"They Sue Psychiatrists, Don't They?" read the headline of *The Washington Post* editorial dated 23 March 1983. Richard M. Restark was discussing the suit brought by the three men wounded in the assassination attempt on President Reagan against John Hinckley's psychiatrist. They alleged that the psychiatrist knew (or should have known) his patient would attempt a political assassination, and that he was negligent in failing to warn law enforcement officers of his patient's dangerousness. Although the District Court dismissed this case [*Brady v. Hopper*, 570 F. Supp. 1333 (1983)], the controversy continues regarding the court-imposed *Tarasoff* duty on psychiatrists to warn third persons—would-be victims—of potentially dangerous psychiatric patients.

Beginning of Controversy

Tarasoff v. Regents of University of California, 131 Cal. Rptr 14, 551 P2d 334, 17 Cal. 3d 425 (1976). The facts of the case in this wrongful death action are summarized as follows:

Poddar told Dr. Moore, the psychologist at a University of California hospital, that he planned to kill his girl friend, Tatiana. Upon Dr. Moore's request, campus police held Poddar

but later released him. Poddar killed Tatiana. Tatiana's parents sued the doctors, the University, and the campus police for their failure to warn them and their failure to confine Poddar.

- Foreseeability of harm to the plaintiff.
- Degree of certainty that the plaintiff suffered injury.
- Closeness of the connection between the defendant's conduct and the injury suffered.
- Moral blame attached to the defendant's conduct.
- Policy of preventing future harm.
- Extent of the burden to the defendant and consequences to the community of imposing a duty to exercise care with resulting liability for breach.
- Availability, cost, and prevalence of insurance for the risk involved.

Did the defendants owe a duty to Tatiana, a nonpatient? The Court stated: "Defendant therapists cannot escape liability merely because Tatiana herself was not their patient. When a therapist determines, or should determine, that his patient presents a serious danger of violence to another he incurs an obligation to use reasonable care to protect the intended victim against such danger."

In making this determination, the following factors should be considered:

The Court also acknowledged the common law requisite of a special relationship existing between either the defendant (doctor) and the potential actor (patient) or the defendant and

the potential victim as necessary to give rise to this duty to warn. The special relationship between Moore and Poddar was held to support affirmative duties for the benefit of Tatiana.

The Court referred to *Merchants National Bank and Trust Company of Fargo v. United States*, 272 F. Supp. 409 (D.N.D. 1967), in which the Veterans Administration (VA) released a formerly dangerous mental patient to work on a farm but did not inform the farmer of the patient's background. The patient borrowed a car, drove it to his wife's home, and killed her. The Court imposed liability on the VA despite the VA's not having a "special relationship" with the victim.

Can there be a cause of action based on the concept of "failure to warn?"

The defense asserted that such a duty would be "unworkable" because of the inability of doctors to predict with accuracy their patients' violent episodes, to which, the Court responded: "The risk that unnecessary warning may be given is a *reasonable* price to pay for the lives of possible victims that may be saved." Defendants asserted that such a duty would severely encroach upon the principle of privileged communication between doctors and patients. The Court cited California's Evidence Code Section 1024's exception to privileged communication; such communication is not privileged "when disclosure is necessary to prevent danger," and *Principles of Medical Ethics of the American Medical Association* (1957) Section 9, which permits a physician to reveal a

When this article was written LT Cashion was senior attorney, Legal Medicine Section, Office of the Judge Advocate General Claims Division, Alexandria, VA. She is now assigned to Naval Legal Services Office Detachment, New Orleans, LA 70146.

confidence when "it becomes necessary in order to protect the welfare of the individual or of the community." The Court concluded that the patient's right to privacy and treatment was outweighed by the public interest in safety against violent assault.

Does "immunity" protect the defendant? The Court said that the defendant therapists, as public employees, could not claim immunity as to the issue of warning. While discretionary policy decisions are immune, ministerial acts are not, and the Court classified the duty to warn as ministerial. (As to the issue of confinement, the Court cited Section 856 which "affords public entities and . . . employees . . . protection from liability for any injury resulting from determining . . . whether to confine a person for mental illness.")

Legal Protection

Estate of Mathes v. Ireland, 419 N.E. 2d 782 (Ind. App., 1981), was a wrongful death action initiated after a former mental patient abducted a woman at knife point and later drowned her. The Court cited *Tarasoff* and said: "If the centers . . . had actually taken charge of Pierce . . . and . . . had actual knowledge that Pierce was extremely dangerous . . . they are bound to exercise reasonable care under the circumstances."

In *Bradley Center, Inc. v. Wessener*, 287 S.E. 2d 716 (Ga. App., 1982), the plaintiffs' mother was murdered by the plaintiffs' father, a patient of the defendant's facility. The Court looked to Section 319 of the *Restatement (Second) of Torts*: [O]ne who takes charge of a third person whom he knows or should know to be likely to cause bodily harm to others if not controlled is under a duty to exercise reasonable care to control the third person to prevent him from doing such harm." The course of treatment of a mental patient involves an exercise of control. The duty runs to the patient and to the would-be victim. The victim

was a foreseeable victim. It was not necessary for the defendant to have foreseen the specific act of murder.

Doyle v. United States, 530 F. Supp. 1278 (C.D. Cal., 1982), was also a wrongful death action. Carson enlisted in the Army. Demonstrating difficulty adjusting, he was sent to chaplains and psychiatrists to whom he confided he had joined the Army to kill people. He was diagnosed as having poor judgment and being antisocial but was believed to be responsible and in touch with his environment. Two days after being administratively separated, Carson went home to California, got a rifle, walked to a nearby college and shot Doyle, a security guard. The Court said there was no liability as there is no duty on the psychiatrist to the general public. Also, this victim was neither identified by the patient nor was he foreseeable by the psychiatrist.

Yet, in *Lipari v. Sears, Roebuck and Co.*, 487 F. Supp. 185 (D. Neb., 1980), where a former VA psychiatric patient purchased a shotgun and fired it into a nightclub, injuring the plaintiff and killing her husband, the Court said that the psychotherapist-patient relationship gives rise to an affirmative duty for the benefit of third persons and found for the plaintiff.

Medical Reaction

The theories forming opposition to *Tarasoff* can be summarized as follows:

- Psychiatrists are unable to predict violence.
- The warning would achieve little benefit to victims in particular and to society in general while causing serious detriment to the patient as well as to society.
- The duty imposed by *Tarasoff* is expressed in vague and incomplete terms.
- Even if the mechanics were resolved, the doctors are unable to dispose of the ethical questions as easily as the Court did.

It is believed that once the patient becomes aware that his doctor has betrayed him by informing the police, the possibility, if not the probability, exists that he may decide to discontinue treatment. Untreated, the patient reduces his opportunity for recovery. Untreated, the patient presents to society a potentially out-of-control person.

Assuming the patient elects to continue treatment, the duty generates other consequences. Aware that the doctor may reveal certain confidences, the patient may be less candid in his communications with the doctor, reducing the effectiveness of diagnosis and treatment. The issuance of such a warning might result in creating self-fulfilling prophecies.

The psychiatrists claim the victim, upon receiving a warning, is likely to react in three different ways, none of which achieves the purpose of the warning. The victim may ignore the warning; he may be forced to change radically his life style; or the victim may be powerless to act.

The psychiatrists conclude that the *Tarasoff* Court misweighed the interests of society and the patient and misjudged the value of a warning and the detriment to psychotherapy.

Impact on Navy Medicine

Tort (negligence) law establishes that Navy medicine must conform its practice to the laws of the different States where it provides medical care, treatment, and services. As the States vary, it is virtually impossible to establish a Navywide policy giving guidance as to how to discharge the *Tarasoff* duty to warn. If a State has declared a position, the Navy is bound to follow it. If the question remains open, guidance should be obtained from attorneys. An evaluation of the State's approach toward confidential communication must be made. If the privilege is absolute, there is a strong indication the *Tarasoff* decision will be rejected. If there exist exceptions

which permit or require disclosure, it is possible the *Tarasoff* duty to warn will be recognized and accepted.

When a patient becomes a potential threat of harm to himself or others, *and* the threat is serious and imminent, involuntary commitment should be considered.

Tarasoff requires that whatever steps are reasonably necessary to protect the victim must be taken. Two methods have been considered appropriate—warn the victim or inform the police. If it is deemed feasible and appropriate to advise the victim, it

should be done through the doctor. If not, perhaps the commanding officer of the medical treatment facility should inform the police, documenting in either event all steps taken. If the decision is made to give such a warning, the warning represents a disclosure of an otherwise confidential communication. In the words of *Tarasoff*, it is necessary to make the disclosure "discreetly, and in a fashion that would preserve the privacy of [his] patient to the fullest extent compatible with the prevention of the threatened danger."

The medical community must accept the fact that society is making it more accountable every day. Perhaps the guns of resistance to *Tarasoff* are fired in defense of this continuing encroachment into the private, insulated world of medicine. For many years the medical judgment of a physician had gone unchallenged. The holding in *Tarasoff* not only challenges that judgment but demands that a doctor be liable for the consequences if he has been negligent. *Tarasoff* represents just one of many avenues for potential liability. □

Look-Alike, Sound-Alike Drugs

Look-alike and sound-alike drug names can easily be misinterpreted. Such misunderstanding can result in the administration of a drug not intended by the prescriber. Awareness of such drug names can reduce potential errors. —Benjamin Teplitsky, R.Ph.

Imuran
Category: Immunosuppressive
Brand Name: Imuran, BW
Generic Name: Azathioprine
Dosage Forms: Tablets, Injection

Coumadin
Category: Anticoagulant
Brand Name: Coumadin, Endo
Generic Name: Warfarin Sodium
Dosage Forms: Tablets, Injection

Rifadin
Category: Antituberculous agent
Brand Name: Rifadin, Dow
Generic Name: Rifampin
Dosage Forms: Capsules

Imferon
Iron preparation
Imferon, Merrell-Dow
Iron Dextran
Injection

Kemadrin
Antiparkinsonism
Kemadrin, BW
Procyclidine HCl
Tablets

Ritalin
Antidepressant
Ritalin, Ciba
Methylphenidate HCl
Tablets

Mother Clarke Honored

Mrs. Ambrosia Clarke, affectionately known as "Mother Clarke," is an 89-year-old widow who has spent over 40 years providing aid and comfort to wounded and ill servicemen and women. She regularly visited patients and staff at Walter Reed Army Medical Center, Fort George Meade, and the Naval Hospital, Bethesda. She has been an inspiration to countless individuals during this time, but currently is very lonely and melancholic because many of "her boys" as she still refers to them have not contacted her. Mother Clarke has recently been forced to move into the home of her son because she is too ill to care for herself. She has many medical problems including degenerative arthritis of the spine which quite severely limits her mobility.

In September COMO R.G. Shaffer, Commander, Naval Medical Command, National Capital Region, and CAPT R.B. Johnson, MC, Commanding Officer, Naval Hospital, Bethesda, presented a letter of commendation and plaque to Mrs. Clarke on behalf of the patients and staff at Bethesda in recognition of her outstanding humanitarian service. For her service to the Army, the Secretary of the Army designated Mother Clarke a Secretary designee for entitlement to medical care at U.S. Army facilities.

Mother Clarke graciously consented to an interview by LT Michael McKenna, MSC, on behalf of U.S. Navy Medicine even though she is in great pain, and visitors are limited to only 15 minutes because of her health.

USNM: How did you become interested in visiting wounded servicemen?
Mrs. Clarke: In the early 1940's, during World War II, my husband and I operated a restaurant in Thurmont, MD, and Army convoy trucks on the

way to Indiantown Gap used to stop there and let two men off to monitor the convoy route for periods of 36 hours at a time. These young soldiers used to come to the restaurant to eat and I began to talk with them and became interested in their lives.

Have you had any members of your own family serve in the Armed Forces?

Yes, I have had four sons and four sons-in-law who served during World War II and Korea.

How many patients have you helped over the years?

It's hard to specify, but probably more than 5,000.

What did you actually do for the patients?

I used to travel to Walter Reed, Fort Meade, and Bethesda delivering gifts and words of encouragement to the patients. I let them know they may have been injured, ill, or away from home, but they were not forgotten.

How did you raise the money for the gifts?

I used to walk the streets with shopping bags and talk with individual merchants and shopkeepers asking their support in donating clothing, personal items, and books for the boys. Most everyone was very generous and supportive of this effort. I used to be able to deliver 300 packages per hospital.

Were there any particularly interesting efforts on behalf of the patients that stick out in your memories?

Yes, Once I went on the old TV show *Strike it Rich* to win prizes for the boys. Everyone on the show was so helpful and wanted me to do well, and I did manage to win a number of prizes.

Have you received any awards or recognition for your work?

Every President since Kennedy has sent me a certificate. On my birthday President and Mrs. Reagan sent a nice card thanking me for my work. I just wish I was able to continue to visit the hospitals, but I can't because of my health. I would like to hear just once more, "Here comes Mother Clarke," from my boys. I have a number of photographs, certificates, and plaques that I received. However, most of all I have my memories.

Mother Clarke's record of service and thoughtful caring for members of the Armed Forces is almost legendary. If there is anyone who remembers this woman from their days as a patient, please drop her a card and help to brighten her day as she undoubtedly did yours. Write: Mother Clarke, c/o Paul Clarke, 101 Allen Drive, Thurmont, MD 21788. □



CAPT Johnson presents Mother Clarke with plaque, photo, and flag for her more than 40 years of humanitarian service.

Photo by HM3 Thomas Kelley

Operational Audiology and Otology: A Case Study

CDR Cameron A. Gillespie, MC, USN
CAPT Henry M. Meinecke, MC, USN

LT James P. Wax, MSC, USNR
CAPT Walter F. Miner, MC, USN

There are few career fields that require better hearing sensitivity than that of the sonar technician. These technicians require not only visual acuity but also an extraordinarily developed auditory skill level. With a sensorineural hearing loss, there is no medical or surgical method to restore the lost hearing. The only recourse is administrative action requiring a rate change or a medical board finding the technician unfit for full duty. A sonar technician with an unrecognized or ignored hearing loss jeopardizes the lives of his entire crew.

Patient History

The history of our patient is unique. A review of his medical record revealed normal hearing until 1973 at which time he was first reported as having marginal to mild hearing loss. By 1976 the condition had progressed and he was fitted with hearing aids. The cause was diagnosed as probable otosclerosis, a condition involving calcium deposits anterior to the stapes foot plate causing fixation of the ossicular chain. The result of this disease is a significant hearing loss. Our patient was informed of his diagnosis and was advised that surgery to remove the area of bony fixation, remove the stapes, and replace the ossicle with a prosthetic device would in all probability result in restoration of his normal hearing. He was advised that due to the delicate nature of the surgery, there was some risk of total hearing loss in the affected ear.

After counseling, the patient decided not to have the surgery and hence was fitted with hearing aids. The hearing aid proved successful for ordinary use, the patient was assigned to a shore billet as an instructor, and the hearing aids allowed him to perform his duties in an admirable fashion.

In the latter part of 1980 the patient was transferred to sea duty aboard USS *Kirk*. Shortly after reporting, he

found that random electromagnetic radiation from shipboard equipment caused a "jamming" effect in his hearing aids, rendering them useless. Therefore he was unable to perform the duties of his rate in a shipboard environment.

The patient was referred for audiologic examination and found to have a mild to moderate conductive hearing loss in the right ear and a moderate to severe conductive hearing loss in the left. Tympanograms were rounded bilaterally and recorded no stapedial reflex which was consistent with otosclerosis with stapes fixation. Because the evaluating facility was not familiar with the electromagnetic radiation environment of the work spaces of sonar technicians, he was fitted with new hearing aids which predictably had the same interference or "jamming" problem.

The patient was then referred to the otorhinolaryngologist at the Naval Regional Medical Center, Yokosuka for corrective surgery, the outcome of which would determine his ability to continue his career as sonar technician. He was admitted for surgery on the left ear in April 1981. After thorough preoperative evaluation by the audiologist and otorhinolaryngologist, it was determined that surgery should be performed on the patient's left ear, the poorer hearing ear. The preoperative audiogram was as follows:

1. Right ear pure tone audiometry:

		KiloHertz	.5	1	2	4	6
Decibels	Air Conduction		40	35	30	15	35
	Bone Conduction		20	15	15	10	15

2. Left ear pure tone audiometry:

		KiloHertz	.5	1	2	4	6
Decibels	Air Conduction		65	50	55	50	55
	Bone Conduction		20	15	15	10	15

3. Average of pure tone thresholds at speech frequencies: (Hertz 500,1,000,2,000)

Right 35 decibels
Left 57 decibels

Dr. Gillespie is currently studying head and neck oncologic and reconstructive surgery under a fellowship at Duke University Hospital, Durham, NC. LT Wax is an audiologist at Naval Hospital, San Diego, CA. When this article was written, Dr. Meinecke was chief of surgery at Naval Hospital, Yokosuka, Japan, and Dr. Miner is commanding officer of the same facility.

From the bone conduction level on the audiogram, it is clear that the left ear was capable of normal hearing. Also, as in most otologic surgery cases, the poorer hearing ear is chosen as the operative ear. In this case, the left ear was chosen for safety reasons. If any adverse effects were realized in the surgical ear, the patient could still rely on his better hearing ear. The other ear could then be surgically corrected 1 year after successful correction of the first was certain. Socially useful hearing is usually considered to be in the range of 30 decibels. Thus, preoperatively the patient had socially useful hearing in the right ear but not in the left. Because of the stringent hearing requirements of the sonarman's occupation, and because of the unacceptability of hearing aids in an electrically noisy environment, surgery was the only indicated therapy.

The patient underwent left stapedectomy and placement of a Robinson prosthesis. This operation involved the elevation of a tympanomeatal flap and the examination of the ossicular chain under general anesthesia. First the incudostapedial joint was disarticulated. The ossicular chain was then manipulated with a Rosen needle and it was found that the malleus had freedom of movement. This was determined by disarticulating the incus from the stapes capitulum prior to manipulation. Thus, the area of mechanical trouble, the fixation of the stapes bone at its articulation with the organ of hearing at the oval window, was clearly at fault. A Barbara needle was used to make a small test opening in the stapes foot plate at its center. The stapedius tendon was left attached to the stapes bone itself to prevent inadvertent loss of the stapes bone into the inner ear upon its removal.

With a Barbara needle, multiple perforations were made across the stapes foot plate in the floor of the middle ear much in the manner of postage stamp perforation. A small right-angle hook was placed underneath the stapes foot plate through this line of perforation and the stapes foot plate was gently elevated. The stapes foot plate came out in two fragments and the stapes bone was freed from its dense attachment to the oval window. The stapedius tendon was then cut with Belluchi scissors and the stapes was sent to the laboratory for pathological examination.

With the inner ear open, a previously harvested perichondrial graft from the tragus was quickly placed over the oval window, thus protecting the inner ear from the drying effects of the atmosphere which might result in a permanent sensorineural hearing loss. With the graft in position, a Robinson bucket prosthesis made of Tantalum was positioned beneath the lenticular process of the incus. This prosthesis is manufactured to replace completely the fixed and otosclerotically involved natural stapes. Being made of a smooth metal, the prosthesis will not become fixed by bony adhesions characteristic of the otosclerotically-fixed stapes. The handle of the so-called bucket prosthesis was then lifted and placed over the long process of the incus, thus correctly self-positioning the metal prosthesis on the oval window graft. Mechanical continuity of the ossicular

chain was thereby established. This was confirmed by gently palpating the malleus at its attachment to the tympanic membrane and by observing movement of the graft over the oval window. At the same time, the round window light reflex was noted to move upon manipulation of the ossicular chain. This confirmed that otosclerosis stapes fixation had been responsible for the conductive hearing loss observed preoperatively and that the otosclerosis was not intracochlear.

Gelatin foam packing was placed around the stapes prosthesis to maintain its position. The eardrum was replaced in its anatomic position and the ear canal was packed with gelatin foam. A dressing was placed over all and at the termination of surgery, the patient was noted to have a normal tuning fork Weber test, lateralizing to the operated ear, thereby indicating preservation of the ear's neural structure. There was no nystagmus, thus indicating that irritation of the labyrinth was minimal.

The patient was kept at strict bedrest for 2 days and thereafter had an uneventful postoperative course. An audiogram was performed and confirmed that hearing had been substantially improved by the surgery. An average gain of 21 decibels was achieved through all the frequencies. The postoperative audiogram administered on the ninth postoperative day was as follows:

1. *Right ear pure tone audiometry:*

		KiloHertz	.5	1	2	4	6
Decibels	Air Conduction		45	40	25	20	40
	Bone Conduction		20	15	15	10	15

2. *Left ear pure tone audiometry:*

		KiloHertz	.5	1	2	4	6
Decibels	Air Conduction		20	15	10	60	65
	Bone Conduction		20	15	05	10	15

3. *Average of pure tone thresholds at speech frequencies:*
(Hertz 500,1,000,2,000)

Right	37 decibels
Left	15 decibels

Summary

The corrective surgery for the left ear proved to be a success as evidenced by the 42-decibel improvement in pure tone audiometry in the speech frequencies. The patient returned to duty and subsequently performed in a satisfactory manner without a hearing aid. He reported that he was satisfied with his auditory rehabilitation because he could now hear well enough to perform the specialized requirements of his rate. He no longer requires amplification by hearing aids and is fit for full duty and a normal life without hearing loss and its consequences. □

Notes & Announcements

In Memoriam

RADM *Herbert Lamont Pugh*, MC (Ret.), 21st Surgeon General of the Navy, died 4 Dec 1984 at Naval Hospital, Bethesda, MD. He was 89.

Dr. Pugh was born on a farm in Albemarle County, VA, on 5 Feb 1895 and received his first 7 years of education in a one-room country school. He entered the University of Virginia in 1914, which he attended for the next 3 years. When the United States entered World War I, Pugh enlisted in the Marines. At the time of the Armistice he was attending the Officer's Training School in Quantico, VA, but shortly thereafter left the service to resume his studies at the University of Virginia, entering and winning the competition for the Herndon Scholarship in the Department of Medicine. Complying with one of the scholarship's provisions, Pugh joined the Navy Medical Corps upon receiving his M.D. degree in 1923. During his senior year in medical school he served as a student intern at the Martha Jefferson Hospital, Charlottesville, VA.



Dr. Pugh was commissioned lieutenant (jg) in 1923, completed a graduate internship at Naval Hospital, Chelsea, MA, and subsequently served at a variety of shore stations and aboard USS *California*, USS *Asheville*, USS *Rochester*, and USS *Gold Star*. He had an assignment in Panama as a member of the Special Service Squadron, and was with the Marines during one of the Nicaragua interventions. He helped set up the Mobile Base Hospital, No. 1 in Guantanamo Bay, Cuba, and after Pearl Harbor, became chief of surgery at the Naval Hospital there, where he treated many of the victims of the attack. Later in the war Dr. Pugh was chief of surgery at San Diego. He left in 1944 to become commanding officer of the Naval Medical School at Bethesda.

On 2 Dec 1946 Dr. Pugh became the Deputy and Assistant Chief of the Bureau of Medicine and Surgery with the rank of rear admiral. On 27 Jan 1951 he took office as Surgeon General of the Navy. During the Korean War he inspected front-line aid stations and other medical facilities, becoming the first Navy Surgeon General to tour an active combat zone.

Following his 4-year term he was appointed Inspector General of the Medical Department and then commanding officer of the National Naval Medical Center, Bethesda in 1955.

Dr. Pugh retired from active service in 1956 and was appointed resident physician of George Washington University in Washington, DC. He spent his retired years as an active member of the University of Virginia Alumni Association, was a founding member of Carl Vinson Hall, a suburban Washington residence for retired Navy and

Marine Corps personnel and their dependents, and wrote extensively for a variety of scientific journals and popular publications. His very readable autobiography, *Navy Surgeon*, was published in 1959.

Two years ago, in preparation for a story in *U.S. Navy Medicine* ["Lamont Pugh: The Medical Department's Elder Statesman," *U.S. Navy Medicine*, October 1982], the Editor spent many wonderful hours with Dr. Pugh as he proudly recounted a rich life filled with adventure and service, and spoke of his friendships and associations with some of the great leaders of this century. The Navy has lost a learned and dedicated physician. All of us have lost another precious link with the past.

CAPT *Edward Clauss*, MSC (Ret.), died 29 Nov 1984. He was born in Vancouver, WA, 13 July 1913, and began his 42-year Navy career in 1931.

Following recruit training, he attended the Hospital Corps School in Portsmouth, VA, and was then assigned to the Naval Hospital, Mare Island, CA. From 1933 to 1935 he served aboard USS *Maryland* as an HAIC, the equivalent of today's HN.

Aboard USS *Langley* in 1939, Clauss was promoted to pharmacists mate 2nd class and, in October of that year, transferred to USS *Altair*. He reported to the Naval Recruiting Station, Salt Lake City in October 1940, was promoted to pharmacists mate 1st class in 1941, and returned to sea aboard USS *Charles Carroll* in July 1942, where he was promoted to chief pharmacists mate.

The following year he was selected as a warrant officer, attended the School of Hospital Administration at Bethesda and, in December 1943, transferred to the Naval Hospital, Great Lakes where he was promoted to chief warrant officer (W-2).

Clauss was transferred in 1944 to USS *Marathon* and was selected as an ensign the following year. He returned to Philadelphia as the staff training officer and subsequently was assigned to the Naval Dental Clinic, Brooklyn, NY. In 1948 Clauss was promoted to lieutenant (jg) and was assigned to the Naval Dental Clinic, Guantanamo Bay, Cuba, where he remained until 1950.

He returned to the Naval Hospital, Philadelphia that year as the assistant fiscal officer, became a lieutenant in 1952, and in 1954 went to the Bureau of Medicine and Surgery. Subsequently, Clauss was head, Fiscal Department for the National Naval Medical Center until July 1960, when he returned to the Naval Hospital, Philadelphia as chief, Fiscal and Supply Department.

Clauss was promoted to commander in 1961 and reassigned as administrative officer from May 1965 until selected for captain 2 years later. He became director, Hospital Administration Division at BUMED and then Deputy Comptroller until his retirement in 1974.

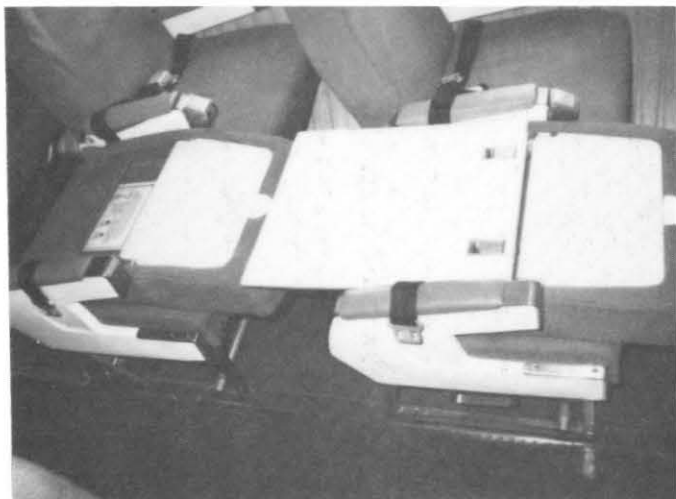
Correction

In the November-December 1984 issue of *U.S. Navy Medicine* on page 10, "Inflight CPR Platform in the C-9 Aircraft," the illustrations were displayed incorrectly. The proper sequence is as follows:

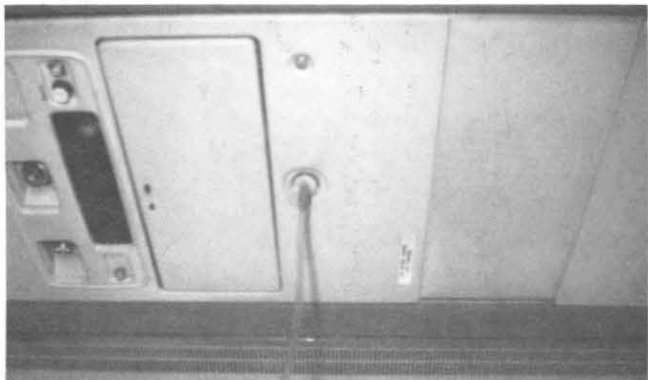
1. In aisle without platform



2. Galley door in place



3. Oxygen tubing attached to overhead nipple

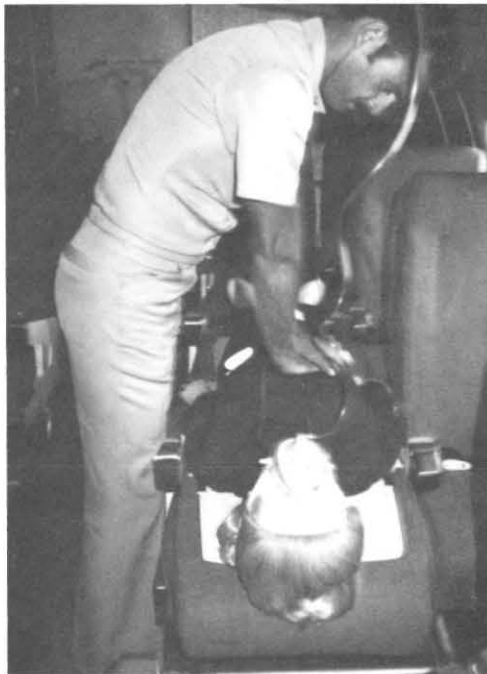


craft," the illustrations were displayed incorrectly. The proper sequence is as follows:

4. Resuci-Annie properly positioned



5. One-man resuscitation effort in progress



6. Two-man resuscitation



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